## AMENDMENTS TO THE SPECIFICATION

At page 14 replace equation (4) with:

$$A(\varphi) = \left\{ E_0 + \sum_{n=1}^{\infty} E_n \cos(nS\varphi + \varepsilon n) + E_k \cos(k\varphi + \gamma_k) \right\}^2 \qquad (4)$$

$$A(\varphi) = \left\{ E_0 + \sum_{m=1}^{\infty} E_m \cos(mS\varphi + \varepsilon_m) + E_k \cos(k\varphi + \gamma_k) \right\}^2 \qquad (4)$$

At page 15 replace equation (5) with:

$$A(\varphi) = \left\{ E_0 + \sum_{n=1}^{\infty} E_n \cos(nS\varphi + \varepsilon_n) \right\}^2$$

$$+ 2 \left\{ E_0 + \sum_{n=1}^{\infty} E_n \cos(nS\varphi + \varepsilon_n) \right\} E_k \cos(k\varphi + \gamma_k)$$

$$+ E_k^2 \cos^2(k\varphi + \gamma_k)$$

$$= Y_0 / 2 + \sum_{n=1}^{\infty} Y_{nS} \cos(nS\varphi + \gamma_{nS})$$

$$+ 2 E_0 E_k \cos(k\varphi + \gamma_k)$$

$$+ 2 E_k \sum_{n=1}^{\infty} E_n \cos(nS\varphi + \varepsilon_n) \cos(k\varphi + \gamma_k)$$

$$+ E_k^2 \cos^2(k\varphi + \gamma_k)$$

$$= \frac{1}{2}(Y_0 + E_k^2) + \sum_{n=1}^{\infty} Y_{nS} \cos(nS\varphi + \gamma_{nS})$$

$$+2E_0E_k\cos(k\varphi+\gamma_k)+\frac{1}{2}E_k^2\cos2(k\varphi+\gamma_k)$$

$$+E_k\sum_{n=1}^{\infty}E_m\left[\cos\{(mS+k)\varphi+\varepsilon_n+\gamma_k\}+\cos\{(mS-k)\varphi+\varepsilon_n-\gamma_k\}\right] \quad (5)$$

$$A(\varphi)=\left\{E_0+\sum_{m=1}^{\infty}E_m\cos(mS\varphi+\varepsilon_m)\right\}^2$$

$$+2\left\{E_0+\sum_{m=1}^{\infty}E_m\cos(mS\varphi+\varepsilon_m)\right\}E_k\cos(k\varphi+\gamma_k)$$

$$+E_k^2\cos^2(k\varphi+\gamma_k)$$

$$=Y_0/2+\sum_{m=1}^{\infty}Y_{mS}\cos(mS\varphi+y_{mS})$$

$$+2E_0E_k\cos(k\varphi+\gamma_k)$$

$$+2E_k\sum_{m=1}^{\infty}E_m\cos(mS\varphi+\varepsilon_m)\cos(k\varphi+\gamma_k)$$

$$+E_k^2\cos^2(k\varphi+\gamma_k)$$

$$=\frac{1}{2}\left(Y_0+E_k^2\right)+\sum_{m=1}^{\infty}Y_{mS}\cos(mS\varphi+y_{mS})$$

$$+2E_0E_k\cos(k\varphi+\gamma_k)+\frac{1}{2}E_k^2\cos2(k\varphi+\gamma_k)$$

$$+E_k\sum_{m=1}^{\infty}E_m\left[\cos\{(mS+k)\varphi+\varepsilon_m+\gamma_k\}+\cos\{(mS-k)\varphi+\varepsilon_m-\gamma_k\}\right] \quad (5)$$

At page 16 replace the equation in line 1 with:

$$\left\{E_0 + \sum_{n=1}^{\infty} E_n \cos(nS\varphi + \varepsilon_n)\right\}^2 = Y_0/2 + \sum_{n=1}^{\infty} Y_{nS} \cos(nS\varphi + y_{nS})$$

$$\left\{E_0 + \sum_{m=1}^{\infty} E_m \cos(mS\varphi + \varepsilon_m)\right\}^2 = Y_0/2 + \sum_{m=1}^{\infty} Y_{mS} \cos(mS\varphi + y_{mS}) \qquad (6)$$

At page 16 replace paragraph [0052] with:

By the same consideration as given above:

A. By the third term in equation 5, equation 3, and equation 6, when k = nP, a cogging torque of the nP-th (the number of poles) component occurs.

B. Here, regarding the fourth term in ~~equation5~~ equation 5, when pulses of the armature function (the permeance) that occur due to the irregularity of the frame thickness are assumed to be smaller than the fundamental wave components ($E_1$), etc. of the armature function, $E_k$ can be assumed to be neglected.

C. By the fifth term in equation 5, equation 3, and equation 6, when nP = ~~nS~~mS + k or nP = | ~~nS~~mS - k |, that is, when k = | nP - mS | and k = nP + mS, cogging torque of the nP-th component occurs.